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T.12
L13
             6 S L9
L14
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GRAPH ATTRIBUTES: RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

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FILE 'ZCA' ENTERED AT 10:43:24 ON 21 AUG 2008 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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=> D L14 1-13 BIB ABS HITSTR HITRN

- L14 ANSWER 1 OF 13 ZCA COPYRIGHT 2008 ACS on STN
- AN 144:222330 ZCA Full-text
- TΙ Electroluminescent chrysene derivatives, and organic electroluminescent devices and displays comprising them in emission layers
- Matsunami, Shigeyuki; Miyabayashi, Yoshihisa; Ichimura, Mari; TN Tamura, Shinichiro
- PA Sony Corp., Japan
- SO Jpn. Kokai Tokkvo Koho, 28 pp.
- CODEN: JKXXAF
- DT Patent

LA Japanese

r AN.	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	JP 2006052324	Α	20060223	JP 2004-235124	200408

20040812 <--

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PRAT JP 2004-235124 OS GT

MARPAT 144:222330

Α8

A16 A17 (R¹)_mд5 A18 .дб R2) n A24 A11 A23

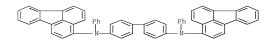
AB Claimed are I [A1-24 = H, halo, OH, C≤20 (substituted) carbonyl (ester), alkyl, alkenyl, etc.; R1-2 = C≤30 (substituted) aryl, heterocycle; m, n = integer of 0-2; m + n = 1-4]. The compds. can be included as electron-transport agents or hole-transport agents, and the devices/displays show high emission efficiency and long service life.

A22

851767-73-2 ΙT

> (dopant; in electroluminescent chrysene derivs. for org. electroluminescent devices/displays)

- RN 851767-73-2 ZCA
- CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'diphenvl- (CA INDEX NAME)



IT 851767-73-2

(dopant; in electroluminescent chrysene derivs. for org. electroluminescent devices/displays)

- L14 ANSWER 2 OF 13 ZCA COPYRIGHT 2008 ACS on STN
- AN 144:222329 ZCA Full-text
- TI Electroluminescent bichrysenes, and organic electroluminescent devices and displays comprising them in emission layers
- IN Matsunami, Shigeyuki; Miyabayashi, Yoshihisa; Ichimura, Mari; Tamura, Shinichiro
- PA Sony Corp., Japan
- SO Jpn. Kokai Tokkyo Koho, 27 pp.
 - CODEN: JKXXAF
- DT Patent
- LA Japanese
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006052323	A	20060223	JP 2004-235123	200408

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PRAI JP 2004-235123 OS MARPAT 144:222329 20040812 <--

GT

AB Claimed are the bichrysenes I [A1-24 = H, halo, OH, C≤20 (substituted) carbonyl (ester), alkyl, alkenyl, etc.]. The bichrysenes can be included as electron-transport agents or hole-transport agents, and the devices/displays show high emission efficiency and long service life.

Ι

IT 851767-73-2

(dopant; in electroluminescent bichrysenes for org. electroluminescent devices/displays)

- RN 851767-73-2 ZCA
- CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'diphenyl- (CA INDEX NAME)

IT 851767-73-2

(dopant; in electroluminescent bichrysenes for org. electroluminescent devices/displays)

- L14 ANSWER 3 OF 13 ZCA COPYRIGHT 2008 ACS on STN
- AN 144:195370 ZCA Full-text
- TI Molecular photovoltaics, method of manufacture and articles derived therefrom
- IN Gui, John Yupeng; Spivack, James Lawrence; Duggal, Anil Raj; Cella,

James Anthony; Alizadeh, Azar; Yakimov, Aharon

PΑ USA

SO U.S. Pat. Appl. Publ., 19 pp.

CODEN: USXXCO

Patent DΨ

LA FAN.	English CNT 1			
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PI	US 20060021647	A1 20060202	US 2004-900624	
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	PT, IE, SI	, LT, LV, FI, RO, M	K, CY, AL, TR, BG, CZ,	EE, HU,
	PL, SK, BA	, HR, IS, YU		
	JP 2006049890	A 20060216	JP 2005-216748	
				200507 27
			<	
	CN 1734792	A 20060215	CN 2005-10087971	

PRAT US 2004-900624 20040728 <--Α

Disclosed herein is a photovoltaic cell comprising an absorber that can absorb electromagnetic radiation; a 1st substrate comprising a 1st conductive surface; a 2nd substrate comprising a 2nd conductive surface that is opposed to the 1st conductive surface and faces the 1st conductive surface of the 1st substrate; an electron transporter that is in elec. communication with the 2nd conductive surface of the 2nd substrate, but is elec. insulated from the 1st substrate; a hole transporter that is in elec. communication with the 1st conductive surface of the 1st substrate, but is elec. insulated from the 2nd substrate; wherein the hole transporter and/or the electron transporter are chem. bonded to an elec. insulating sheath; and wherein the hole transporter and/or the electron transporter are chem. bonded to the absorber.

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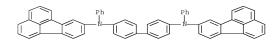
200507 2.8

TΤ 139255-23-5

> (conducting polymer and hole and electron transport in mol. photovoltaic materials and devices)

139255-23-5 ZCA RN

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-8-fluoranthenyl-N4,N4'-diphenyl- (CA INDEX NAME)



IT 139255-23-5

(conducting polymer and hole and electron transport in mol. photovoltaic materials and devices)

- L14 ANSWER 4 OF 13 ZCA COPYRIGHT 2008 ACS on STN
- AN 144:117548 ZCA Full-text
- TI Organic electroluminescent devices with high luminosity and long lifetime and amines therefor
- IN Totani, Yoshiyuki; Tanabe, Yoshimitsu; Ochi, Takahiko; Tsukada, Hidetaka; Shimamura, Takehiko
- PA Mitsui Chemicals Inc., Japan
- SO Jpn. Kokai Tokkyo Koho, 64 pp.
 - CODEN: JKXXAF
- DT Patent
- LA Japanese
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006016384	A	20060119	JP 2005-159559	200505
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20040603 <--

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PRAI JP 2004-165607 A
OS MARPAT 144:117548

GΙ

$$(R^{2})_{m}$$

$$(R^{2})_{m}$$

$$(R^{3})_{n}$$

$$(R^{3})_{n}$$

$$(R^{3})_{n}$$

$$(R^{3})_{n}$$

$$(R^{3})_{n}$$

$$(R^{3})_{n}$$

$$(R^{3})_{n}$$

$$(R^{3})_{n}$$

AB The amines are I [R1-R3 = halo, amino, Xn'Z (Z = linear, branched, or cyclic alkyl, aryl, aralkyl; X = 0, S; n' = 0, 1); l, m, n = 0-4; Al, A2 = ArlAr2N (Arl, Ar2 = aryl, linear, branched, or cyclic alkyl, aralkyl); s, t = 0-5; s + l ≤5; t + m ≤5; s and/or t ≥1] or II [R1, R2 = halo, Xn'Z (Z, X, n' = same as above); R3 = halo, amino, Xn'Z (Z, X, n' = same as above); l, m, n = 0-4; Arl, Ar2 = same as above]. Also claimed are org. EL devices (e.g., LCD backlight, planar light sources) having the amines between a pair of electrodes.

IT 873000-39-6P

(substituted 2,3-diphenylquinoxalines for org. electroluminescent devices with high luminosity and long lifetime)

RN 873000-39-6 ZCA CN 3-Fluoranthenami

3-Fluoranthenamine, N,N'-(2,3-quinoxalinediyl-di-4,1-phenylene)bis[N-phenyl- (9CI) (CA INDEX NAME)

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IT
    873000-39-6P
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(substituted 2,3-diphenylquinoxalines for org. electroluminescent devices with high luminosity and long lifetime)

L14 ANSWER 5 OF 13 ZCA COPYRIGHT 2008 ACS on STN

143:469728 ZCA Full-text AN

Organic compound for electroluminescent device TI

Schaefer, Thomas; Bardon, Kristina IN

Ciba Specialty Chemicals Holding Inc., Switz. PA

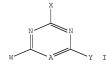
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LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, A 20070418 CN 2005-80013601 CN 1950479

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	KR 2007010191	A	20070122	KR 2006-725158	
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PRAT	EP 2004-101826	А	20040429	<	
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OS	MARPAT 143:469728	**	20030120		
GI	14111111 143.403/20				
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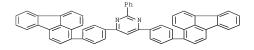


AB A org. compd. is described by the general formula I (where A = CH, N; X,W,Y = (independently) arom. groups described in the text). An electroluminescent devices using the org. compd. is also described.

IT 869016-09-1P

(triazine or pyrimidine compds. for electroluminescent device) RN 869016-09-1 ZCA

CN Pyrimidine, 4,6-bis[4-(3-fluoranthenyl)phenyl]-2-phenyl- (CA INDEX NAME)



ΤТ 869016-09-1P

(triazine or pyrimidine compds. for electroluminescent device) THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 18 ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L14 ANSWER 6 OF 13 ZCA COPYRIGHT 2008 ACS on STN
- AN 143:356324 ZCA Full-text
- TΙ Organic substance for organic electroluminescent device
- IN Matsunami, Shiqeyuki; Takada, Kazunori
- PA Sony Corp., Japan
- Jpn. Kokai Tokkyo Koho, 28 pp. SO
- CODEN: JKXXAF DТ Patent
- LA Japanese

FAN.CNT 1 DAMENIE NO

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005272803	A	20051006	JP 2004-280868	
					200409
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ADDITIONATION NO

20040224 <--PRAI JP 2004-47478 Α

OS MARPAT 143:356324

- AB The invention relates to an org. substance suited for use in an org. electroluminescent device, comprising amino group-substituted bifluoranthene derivs.
- ΙT 866022-37-9P 866022-38-0P
 - (org. substance for org. electroluminescent device)
- 866022-37-9 ZCA RN
- [8,8'-Bifluoranthene]-3,3'-diamine, N3,N3'-di-2-naphthalenyl-N3,N3'-CN diphenvl- (CA INDEX NAME)

RN 866022-38-0 ZCA

CN [3,3'-Bifluoranthene]-6,9'-diamine, N6,N6,N9',N9'-tetraphenyl- (CA INDEX NAME)

TT 866022-37-9P 866022-38-0P

(org. substance for org. electroluminescent device)

- ANSWER 7 OF 13 ZCA COPYRIGHT 2008 ACS on STN L14
- AN 142:472316 ZCA Full-text
- TΙ Organic electroluminescent device and display
- TN Ueda, Naoyuki; Takada, Ichinori

PATENT NO. KIND

- PA Sony Corporation, Japan
- PCT Int. Appl., 42 pp. SO
 - CODEN: PIXXD2
- Patent DT
- LA Japanese
- FAN.CNT 1

PI	WO 2005044942	A1	20050519	WO 2004-JP16794	
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DATE APPLICATION NO. DATE

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             SG. SK. SL. SY. TJ. TM. TN. TR. TT. TZ. UA. UG. US. UZ. VC.
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    WO 2004-JP16794
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                               20041105 <--
OS
    MARPAT 142:472316
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AB An org. electroluminescent device is characterized in that it emits green light by contg. a fluoranthene deriv. in a light-emitting layer. The fluoranthene deriv. is introduced into the light-emitting layer as a guest material, and the green org. electroluminescent device can have sufficiently good luminous efficiency and color purity and can be more reliable by using an org. material having a fluorescent spectrum overlapping the absorption spectrum of the fluoranthene deriv., such as an aryl anthracene deriv., as the host material.

IT 139255-23-5 851767-73-2 851767-74-3 851767-75-4 851767-77-6 851767-82-3 851767-83-4 851767-84-5 851768-03-1

(org. electroluminescent device and display)

RN 139255-23-5 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-8-fluoranthenyl-N4,N4'diphenyl- (CA INDEX NAME)

RN 851767-73-2 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'diphenyl- (CA INDEX NAME)

RN 851767-74-3 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'-bis(4methylphenyl)- (CA INDEX NAME)

RN 851767-75-4 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'-bis(3methylphenyl)- (CA INDEX NAME)

RN 851767-77-6 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'-bis(2methylphenyl)- (CA INDEX NAME)

RN 851767-82-3 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-bis([1,1'-biphenyl]-2-yl)N4,N4'-di-3-fluoranthenyl- (CA INDEX NAME)

RN 851767-83-4 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'-di-1naphthalenyl- (CA INDEX NAME)

RN 851767-84-5 ZCA

CN [1,1'-Binaphthalene]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'diphenyl- (CA INDEX NAME)

RN 851768-03-1 ZCA

CN [9,9'-Bianthracene]-10,10'-diamine, N10,N10'-di-3-fluoranthenyl-N10,N10'-bis(3-methylphenyl)- (CA INDEX NAME)

IT 139255-23-5 851767-73-2 851767-74-3 851767-75-4 851767-77-6 851767-82-3 851767-83-4 851767-84-5 851768-03-1

(org. electroluminescent device and display)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 8 OF 13 ZCA COPYRIGHT 2008 ACS on STN

AN 142:472274 ZCA Full-text

TI Organic light-emitting material and its preparation method

IN PA SO DT LA	Takada Sony C PCT In CODEN: Patent Japane	, Ich orpor t. Ap PIXX	inor atio pl.,	i; U n, J	eda, apan	Nac		anu	103	Pre.	para	21011	me c.	iiou		
FAN.	CNT 1 PATENT	NO.			KIN	D	DATE			APPL	ICAT	ION	NO.		D.	ATE
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	US 200	70149	815		A1		2007	0628		US 2	< 006-	5957	10		2	00605

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PRAI JP 2003-377904 A 20031107 <-JP 2004-255344 A 20040902 <-JP 2004-315486 A 20041029 <-WO 2004-JP16803 W 20041105 <-MARPAT 142:472274

AB Disclosed is an org. light-emitting material which is characterized by being represented by the general formula I and used in a lightemitting layer of a green light-emitting device. In the general formula I, n1 is an integer of not less than 1 and not more than 3; R1 represents an alkyl group having 10 or less carbon atoms; Ar1 represents a monovalent group which is derived from a monocyclic or condensed-ring arom. hydrocarbon having 20 or less carbon atoms, and may have a substituent having 10 or less carbon atoms; and Ar2 represents a divalent group which is derived from a ring assembly including 1-3 rings, having 30 or less carbon atoms and being constituted by a monocyclic or condensed-ring arom. hydrocarbon, and may have a substituent having 4 or less carbon atoms. Consequently, there is provided a more highly reliable org. light-emitting material with sufficiently good luminous efficiency and color purity which is suitable for constituting a green light-emitting layer. Also disclosed is a method for producing such an orq. light-emitting material.

IT 851767-73-2P 851767-74-3P 851767-75-4P

851767-77-6P 851767-78-7P 851767-80-1P 851767-82-3P 851767-83-4P 851767-84-5P

(org. light-emitting material and prepn. method)

RN 851767-73-2 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'diphenyl- (CA INDEX NAME)

RN 851767-74-3 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'-bis(4methylphenyl)- (CA INDEX NAME)

RN 851767-75-4 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'-bis(3methylphenyl)- (CA INDEX NAME)

RN 851767-77-6 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'-bis(2methylphenyl)- (CA INDEX NAME)

RN 851767-78-7 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-bis([1,1'-biphenyl]-4-yl)-N4,N4'-di-3-fluoranthenyl- (CA INDEX NAME)

RN 851767-80-1 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-bis([1,1'-biphenyl]-3-yl)-N4,N4'-di-3-fluoranthenyl- (CA INDEX NAME)

RN 851767-82-3 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-bis([1,1'-biphenyl]-2-yl)N4,N4'-di-3-fluoranthenyl- (CA INDEX NAME)

RN 851767-83-4 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'-di-1naphthalenyl- (CA INDEX NAME)

RN 851767-84-5 ZCA

CN [1,1'-Binaphthalene]-4,4'-diamine, N4,N4'-di-3-fluoranthenyl-N4,N4'diphenyl- (CA INDEX NAME)

IT 851767-73-2P 851767-74-3P 851767-75-4P

851767-77-6P 851767-78-7P 851767-80-1P

851767-82-3P 851767-83-4P 851767-84-5P (org. light-emitting material and prepn. method)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 9 OF 13 ZCA COPYRIGHT 2008 ACS on STN

AN 142:29756 ZCA Full-text

TI Organic electroluminescent devices and heat-resistant durable fluorenylamines therefor

IN Totani, Yoshiyuki; Shimamura, Takehiko; Tanabe, Yoshimitsu; Tsukada, Hidetaka

PA Mitsui Chemicals Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 32 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004339064	A	20041202	JP 2003-133908	

200305

PRAI JP 2003-133908

OS MARPAT 142:29756

GΙ

20030513 <--

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AB The fluorenylamines are I [X1 = N-carbazolyl, NArlAr2; X2 = NAr3Ar4; Ar1-Ar4 = aryl; ≥1 of Ar1-Ar4 = fluoranthenyl; Z1-Z6 = H, halo, OnZ; Z = linear, branched, or cyclic alkyl, aryl; n = 0, 1; R1, R2 = H, linear, branched, or cyclic alkyl, aryl, aralkyll. Also claimed are electroluminescent devices having ≥1 layers (e.g., hole-injection/transport layers, luminescent layers) contg. the amines between a pair of electrodes.

IT 799559-69-6P 799559-73-2P 799559-77-6P

799559-81-2P 799559-84-5P 799559-87-8P

(org. electroluminescent devices contg. fluoranthenyl fluorenylamines with good heat resistance and durability)

RN 799559-69-6 ZCA

CN 9H-Fluorene-2,7-diamine, N2,N7-di-3-fluoranthenyl-9,9-dimethyl-N2,N7-diphenyl- (CA INDEX NAME)

RN

CN 9H-Fluorene-2,7-diamine, 9,9-dicyclohexyl-N2,N7-di-3-fluoranthenyl-N2,N7-diphenyl- (CA INDEX NAME)

RN 799559-77-6 ZCA

CN 9H-Fluorene-2,7-diamine, N2,N7-di-3-fluoranthenyl-9,9-dimethyl-N2,N7-di-1-naphthalenyl- (CA INDEX NAME)

RN 799559-81-2 ZCA

CN 9H-Fluorene-2,7-diamine, N2,N7-bis([1,1'-biphenyl]-4-yl)-N2,N7-di-3-fluoranthenyl-9,9-dimethyl- (CA INDEX NAME)

RN 799559-84-5 ZCA

CN 9H-Fluorene-2,7-diamine, N2,N7-bis([1,1'-biphenyl]-4-yl)-9,9dicyclohexyl-N2,N7-di-3-fluoranthenyl- (CA INDEX NAME)

RN 799559-87-8 ZCA

CN 9H-Fluorene-2,7-diamine, N2,N7-bis([1,1'-biphenyl]-4-y1)-N2,N7-di-3-fluoranthenyl-9,9-bis(phenylmethyl)- (CA INDEX NAME)

IT 799559-69-6P 799559-73-2P 799559-77-6P 799559-81-2P 799559-84-5P 799559-87-8P

(org. electroluminescent devices contg. fluoranthenyl fluorenylamines with good heat resistance and durability)

L14 ANSWER 10 OF 13 ZCA COPYRIGHT 2008 ACS on STN

140:311707 ZCA Full-text AN

Phenanthroline compound and organic light emitting device using same TI

IN Okajima, Maki; Kawai, Tatsundo; Takiguchi, Takao; Suzuki, Koichi; Senoo, Akihiro; Hasegawa, Toshinori; Okinaka, Keiji

Canon Kabushiki Kaisha, Japan PA

SO DT LA		Appl., 6		apan		
FAN.	CNT 1 PATENT N	10.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 20040	126870		20040401	WO 2003-JP11485	200309
		CN, CO, CI GD, GE, GI LC, LK, LI NI, NO, NI SL, SY, To ZA, ZM, ZM	R, CU, C H, GM, H R, LS, L Z, OM, P J, TM, T W	Z, DE, DK, R, HU, ID, T, LU, LV, G, PH, PL, N, TR, TT,	BA, BB, BG, BR, BY, BZ, DM, DZ, EC, EE, EG, ES, IL, IN, IS, KE, KG, KP, MA, MD, MG, MK, MN, MW, PT, RO, RU, SC, SD, SE, TZ, UA, UG, US, UZ, VC,	CA, CH, FI, GB, KR, KZ, MX, MZ, SG, SK, VN, YU,
		BY, KG, KEE, ES, F	Z, MD, R I, FR, G R, BF, B	U, TJ, TM, B, GR, HU,	SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, IE, IT, LU, MC, NL, PT, CI, CM, GA, GN, GQ, GW,	DE, DK, RO, SE,
	JP 20041	07263	A		JP 2002-272408	200209 19
	AU 20032	60955	A1	20040408	AU 2003-260955	200309 09
	US 20060	1097227	A1	20060511	US 2005-527192	200503 10
PRAI OS GI	JP 2002- WO 2003- MARPAT 1		A W	20020919 20030909	<	

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Phenanthroline derivs. are described by the general formulas I, II, and III (R1-16 = independently selected H, (un) substituted alkyl, (un) substituted aralkyl, (un) substituted aryl, (un) substituted heterocyclic, and halo atom; Ar1-8 = independently selected (un) substituted fluorenyl, (un) substituted fluoranthenyl, (un) substituted perylenyl, and (un) substituted carbazolyl). Org. light-emitting devices using the phenanthroline derivs. (e.g., as an electron-transporting layer or a light-emitting layer) are also described.

IT 676542-74-8 676542-75-9 676542-79-3 676542-87-3

(phenanthroline derivs. and org. light-emitting devices using them)

RN 676542-74-8 ZCA

CN 1,10-Phenanthroline, 2,4,7,9-tetra-8-fluoranthenyl- (CA INDEX NAME)

RN 676542-75-9 ZCA

CN 3-Perylenamine, 9,9'-(2,9-di-8-fluoranthenyl-1,10-phenanthroline-3,8diyl)bis[N,N-dimethyl- (9CI) (CA INDEX NAME)

RN 676542-79-3 ZCA

CN 3-Fluoranthenecarbonitrile, 8,8'-(4,7-diphenyl-1,10-phenanthroline-2,9-diyl)bis- (CA INDEX NAME)

RN 676542-87-3 ZCA

CN Benzo[4,5]cyclopenta[1,2,3-de]naphthalen-3-amine, 8-[3,8-bis(benzo[4,5]cyclopenta[1,2,3-de]naphthalen-8-y1)-9-[4-(diphenylamino)benzo[4,5]cyclopenta[1,2,3-de]naphthalen-8-y1]-1,10phenanthrolin-2-y1]-N,N-diphenyl- (CA INDEX NAME)

676542-74-8 676542-75-9 676542-79-3 TΤ 676542-87-3

(phenanthroline derivs. and orq. light-emitting devices using them)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 11 OF 13 ZCA COPYRIGHT 2008 ACS on STN

AN 140:294505 ZCA Full-text

TI Organic electroluminescent device comprising diazafluorene compound

TN Suzuki, Koichi; Kasahara, Aki; Kawai, Tatsuhito; Hasegawa,

Toshinori; Okinaka, Keiji; Senoo, Akihiro

PA Canon Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 41 pp.

CODEN: JKXXAF

DT Patent

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	CNT 1				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004091444	A	20040325	JP 2002-258591	200209

04

PRAT JP 2002-258591

20020904 <--

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OS MARPAT 140:294505

- AB The invention relates to an org. electroluminescent device comprising diazafluorene compd. represented by I [R1 and R2 = H, alkyl, aryl, etc.; R3 and R4 = H, alkyl, aryl, and heterocyclic; n = 1-10 integer].
- IT 675600-07-4 675600-29-0 675600-34-7
 (org. electroluminescent device comprising diazafluorene compd.)
- RN 675600-07-4 ZCA
- CN 3-Fluoranthenamine, 8,8'-(5,5-dimethyl-5H-cyclopenta[2,1-b:3,4-b']dipyridine-2,8-diyl)bis[N,N-diphenyl- (9CI) (CA INDEX NAME)

- RN 675600-29-0 ZCA
- CN 3,3'-Bi-5H-cyclopenta[2,1-b:3,4-b']dipyridine, 7,7'-di-8fluoranthenyl-5,5,5',5'-tetraphenyl- (9CI) (CA INDEX NAME)



RN 675600-34-7 ZCA

CN 3-Fluoranthenecarbonitrile, 8-[9-(4-cyano-8-fluorantheny1)-12,12-bis(phenylmethy1)-12H-cyplopenta[2,1-b:3,4-b']diquinolin-2-y1]-(9CI) (CA INDEX NAME)

- IT 675600-07-4 675600-29-0 675600-34-7
 (org. electroluminescent device comprising diazafluorene compd.)
- L14 ANSWER 12 OF 13 ZCA COPYRIGHT 2008 ACS on STN
- AN 132:187598 ZCA Full-text
- TI Electrophotographic photoreceptor containing triarylamine charge-transporting agent, process cartridge, and apparatus
- IN Kikuchi, Norihiro; Kanamaru, Tetsuo; Kunieda, Mitsuhiro
- PA Canon Inc., Japan
- SO Jpn. Kokai Tokkyo Koho, 14 pp.
 - CODEN: JKXXAF
- DT Patent
- LA Japanese
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000056489	A	20000225	JP 1998-233500	

199808

19980806 <--

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PRAI JP 1998-233500 OS MARPAT 132:187598

GΙ

AB The photoreceptor comprising an elec. conducting support having thereon a photosensitive layer contg. I [Ar1, Ar4 = (substituted) aryl; Ar2, Ar3 = (substituted) fluorenyl; R1 = H, halo, cyano, NO2, alkyl, alkoxy, aryloxy]. The process cartridge contains the obtained photoreceptor, >1 of charging, developing, and cleaning devices, is detachable to a main machine. The electrophotog, app. involves the photoreceptor, a charging, an imagewise exposing, a developing, and a transfer device. The photoreceptor shows high sensitivity, anticracking property, less transfer memory, and less crystn. of a charge transporting agent.

IT 259244~59~2

(electrophotog, photoreceptor contg, triarylamine charge-transporting agent)

RN 259244-59-2 ZCA

1,3-Benzenediamine, N1-(9,9-dimethyl-9H-fluoren-2-yl)-N1,N3-di-3-fluoranthenyl-N3-9H-fluoren-2-yl- (CA INDEX NAME)

CN

(electrophotog. photoreceptor contg. triarylamine charge-transporting agent)

L14 ANSWER 13 OF 13 ZCA COPYRIGHT 2008 ACS on STN

AN 117:16860 ZCA Full-text

OREF 117:2955a,2958a

TI Electroluminescent device with organic electroluminescent medium

IN VanSlyke, Steven A.; Tang, Ching W.; O'Brien, Michael E.; Chen, Chin H.

PA Eastman Kodak Co., USA

SO U.S., 12 pp. CODEN: USXXAM

DT Patent

LA English

FAN	CNT	1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5061569	A	19911029	US 1990-561552	199007 26
CA 2046135	A1	19920127	< CA 1991-2046135	199107 03
CA 2046135 JP 05234681	C A	19961210 19930910	< JP 1991-186312	199107
JP 2851185	В2	19990127	<	25
EP 468528	A1	19920129	EP 1991-112621	199107 26

EP 468528 B1 19950621 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE PRAI US 1990-561552 A 19900726 <--OS MARPAT 117:16860

AB Internal junction org. electroluminescent devices are described which comprise an anode, an org. hole-injecting and -transporting layer, an org. electron-injecting and -transporting layer, and a cathode in which the hole-injecting and -transporting zone employs a hole-transporting arom. tertiary amine comprising ≥2 tertiary amine moieties and includes an arom. moiety contg. ≥2 fused arom. rings which is attached to a tertiary amine N atom.

IT 139255-23-5

(electroluminescent devices with hole-transporting layers from)

RN 139255-23-5 ZCA

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-8-fluoranthenyl-N4,N4'diphenyl- (CA INDEX NAME)

IT 139255-23-5

(electroluminescent devices with hole-transporting layers from)

=> D L15 1-6 BIB ABS HITSTR HITRN

L15 ANSWER 1 OF 6 ZCA COPYRIGHT 2008 ACS on STN

AN 143:86374 ZCA Full-text

TI Organic electroluminescent device using carborane compound

IN Suzuki, Koichi; Okajima, Aki; Ueno, Kazunori

PA Canon Inc., Japan SO Jpn. Kokai Tokkyo

O Jpn. Kokai Tokkyo Koho, 47 pp.

CODEN: JKXXAF
DT Patent

LA Japanese

LA Japanese FAN.CNT 1

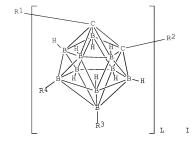
	DAMENE NO	KIND	DATE	ADDITION NO	DATE
	PATENT NO.	KIND	DAIL	APPLICATION NO.	DAIL
ΡI	JP 2005166574	A	20050623	JP 2003-406967	
					200312

05

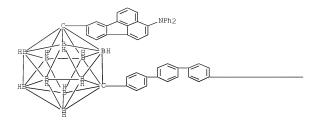
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PRAI JP 2003-406967 OS MARPAT 143:86374 20031205 <--

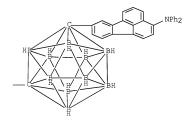
GΙ



- AB The invention refers to an electroluminescent device comprising at least one layer contg. carborane compd. I [R1-4 = H, (un)substituted alkyl, aryl heterocycle, condensed polycyclic arom. or condensed polycyclic heterocycle; L = 1 20].
- IT 855312-46-8
 (Org. electroluminescent device using carborane compd.)
 RN 855312-46-8 ZCA
- CN 3-Fluoranthenamine, 8,8'-[[1,1':4',1''-terphenyl]-4,4''-diylbis(1,7-dicarbadodecaborane(12)-7,1-diyl)]bis[N,N-diphenyl-(9CI) (CA INDEX NAME)



PAGE 1-B



L15 ANSWER 2 OF 6 ZCA COPYRIGHT 2008 ACS on STN

AN 140:294505 ZCA Full-text

TI Organic electroluminescent device comprising diazafluorene compound

IN Suzuki, Koichi; Kasahara, Aki; Kawai, Tatsuhito; Hasegawa, Toshinori; Okinaka, Keiji; Senoo, Akihiro

PA Canon Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 41 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004091444	A	20040325	JP 2002-258591	200209

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20020904 <--

PRAI JP 2002-258591 OS MARPAT 140:294505

J5 MARPAT 140:29450

GΙ

$$R^{1}$$
 R^{2} R^{2} R^{2} R^{2} R^{2} R^{2}

- AB The invention relates to an org. electroluminescent device comprising diazafluorene compd. represented by I [R1 and R2 = H, alkyl, aryl, etc.; R3 and R4 = H, alkyl, aryl, and heterocyclic; n = 1-10 integer].
- IT 675600-43-8

(org. electroluminescent device comprising diazafluorene compd.)

RN 675600-43-8 ZCA

CN 6H-Cyclopenta[2,1-b:3,4-b']di[1,8]naphthyridine, 3-(3-methoxy-8-fluoranthenyl)-9-(4-methoxy-8-fluoranthenyl)-6,6diphenyl-(9CI) (CA INDEX NAME)

IT 675600-43-8

(org. electroluminescent device comprising diazafluorene compd.)

L15 ANSWER 3 OF 6 ZCA COPYRIGHT 2008 ACS on STN

AN 136:207522 ZCA Full-text

TI Fluoranthene compounds, and organic electroluminescent device employing same compounds

IN Hosokawa, Chishio; Iwakuma, Toshihiro

PA Idemitsu Kosan Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent LA Japanese

FAN. CNT 1

I'AN.	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002069044	A	20020308	JP 2000-255141	200008

25

PRAI JP 2000-255141

20000825 <--

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OS MARPAT 136:207522

AB Title fluoranthene compd. Xn-Ar [Ar = (substituted) C6-40 arom. ring, C6-40 arylamino, C6-60 diaminoaryl, C6-60 triaminoaryl, C3-40 heterocycle, or (substituted) ethenylene; X = monovalent fluoranthene compd.; n = 2-4] is claimed. Also claimed is an org. electroluminescent device contg. the fluoranthene compd. in (multilayered) org. compd. film. The device shows high heat resistance and provides high emission efficiency.

IT 401813-23-8P 401813-24-9P

(fluoranthene compds., and org. electroluminescent device contg. same compds.)

RN 401813-23-8 ZCA

CN 1,3,4-Thiadiazole, 2,5-bis(7,10-diphenyl-3-fluoranthenyl)- (CA INDEX NAME)

RN 401813-24-9 ZCA

IT 401813-31-8P

(in prepn. of fluoranthene compds. for org. electroluminescent device)

RN 401813-31-8 ZCA

CN 3-Fluoranthenecarboxylic acid, 7,10-diphenyl-, 2-[(7,10-diphenyl-3-fluoranthenyl)carbonyl]hydrazide (CA INDEX NAME)

IT 401813-23-8P 401813-24-9P

(fluoranthene compds., and org. electroluminescent device contg. same compds.)

IT 401813-31-8P

(in prepn. of fluoranthene compds. for org. electroluminescent device) $% \left(1\right) =\left(1\right) \left(1\right) \left($

L15 ANSWER 4 OF 6 ZCA COPYRIGHT 2008 ACS on STN

AN 114:177108 ZCA Full-text

OREF 114:29667a,29670a

TI New derivatives of diphenyl thiophosphoric and diphenyl phosphoric acids. 3. Synthesis and complexing properties of N-(3-fluoranthenyl)-N'-(diphenylthiophosphoryl)thiourea

AU Bovykin, B. A.; Shenbor, M. I.; Tikhnov, V. I.; Semeryazhko, N. V.

CS USSR SO Voprosy Khimii i Khimicheskoi Tekhnologii (1989), 90, 43-6 CODEN: VKKCAJ: ISSN: 0321-4095

DT Journal

LA Russian

OS CASREACT 114:177108

AB N-(3-Fluoranthenyl)-N'-(diphenylthiophosphoryl)thiourea (HL) was prepd. from SCN(S)P(OPh)2 and 3-aminofluoranthene; ML2 (M = Mn, Fe, Co, Ni, Cu, Zn) were prepd. from HL and M(OAc)2 in aq. Me2CO in the presence of NaOH. ML2 and HL were characterized by IR spectra. L is bidentate, coordinating through the 2 S atoms.

IT 133017-75-1P 133017-76-2P 133017-77-3P 133017-78-4P 133017-79-5P 133017-80-8P

001/-/8-42 13301/-/9-32 13301/-80-8

(prepn. and IR spectrum of)

RN 133017-75-1 ZCA CN Manganese, bis[0,0

Manganese, bis[0,0-diphenyl [(3-fluoranthenylamino)thioxomethyl]phos phoramidothioato-S,S']- (9CI) (CA INDEX NAME)

RN 133017-76-2 ZCA

CN Iron, bis[0,0-diphenyl [(3-fluoranthenylamino)thioxomethyl]phosphora
midothioato-S,S']- (9CI) (CA INDEX NAME)

RN 133017-77-3 ZCA

CN Cobalt, bis[0,0-diphenyl [(3-fluoranthenylamino)thioxomethyl]phospho ramidothioato-S,S']- (9CI) (CA INDEX NAME)

RN 133017-78-4 ZCA

CN Nickel, bis[0,0-diphenyl [(3-fluoranthenylamino)thioxomethyl]phospho ramidothioato-S,S']- (9CI) (CA INDEX NAME)

RN 133017-79-5 ZCA

CN Copper, bis[0,0-diphenyl [(3-fluoranthenylamino)thioxomethyl]phospho ramidothioato-S,S']- (9CI) (CA INDEX NAME)

RN 133017-80-8 ZCA

CN Zinc, bis[0,0-diphenyl [(3-fluoranthenylamino)thioxomethyl]phosphora midothioato-S,S']-, (T-4)- (9CI) (CA INDEX NAME)

IT 133017-75-1P 133017-76-2P 133017-77-3P 133017-78-4P 133017-79-5P 133017-80-8P (prepn. and IR spectrum of)

L15 ANSWER 5 OF 6 ZCA COPYRIGHT 2008 ACS on STN

AN 113:14802 ZCA Full-text OREF 113:2471a,2474a

TΙ

Octazonium salt compounds and tetrakisazo compounds and manufacture thereof

IN Yamada, Yasuyuki; Ito, Naoto; Nishizawa, Isao; Yamaquchi, Teruhiro

PA Mitsui Toatsu Chemicals, Inc., Japan

Jpn. Kokai Tokkyo Koho, 13 pp. SO

CODEN: JKXXAF

DТ Patent.

T.A Japanese

FAN CNT 1

I IIIV	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	 JP 01230573	A	19890914	JP 1988-277303	
LI	0F 01230373	Δ	19090914	OF 1900-277303	198811
				<	04
PRAI	JP 08026013 I JP 1987-290700	B A1	19960313 19871119	<	
CT					

The title salts have the general formula Q(-p-C6H4N2+X-)4 (Q = AB thiophene-1,1-dioxide-2,3,4,5-tetrayl; X- = anion) which are coupled with I [at o-position with respect to OH, Z = (un) substituted carboor heterocycle member; Y = -CONR1R2, CONHN:CR3R4; R1 = (un) substituted carbo- or heterocycle group; R2 = H, (un) substituted alkyl, phenyl; R3 = (un)substituted carbocycle group; R4 = H, alkyl, (un) substituted phenyl; R3R4 = ring member] to give the title tetrakisazo compds. O(-p-C6H7N:NA)4 useful as charge generators in electrophotog, photoconductors.

127637-37-0P IΤ

> (manuf. and use of, as charge generator in electrophotog. photoconductors)

RN 127637-37-0 ZCA CN 11H-Benzo[a]carbazole-3-carboxamide, 1,1',1'',1'''-[(1,1-dioxido-2,3,4,5-thiophenetetrayl)tetrakis(4,1-phenyleneazo)]tetrakis[N-3-fluoranthenyl-2-hydroxy-(9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

127637-37-0P IT

> (manuf. and use of, as charge generator in electrophotog. photoconductors)

L15 ANSWER 6 OF 6 ZCA COPYRIGHT 2008 ACS on STN

110:163563 ZCA Full-text AN

OREF 110:26917a,26920a

Electrophotographic photoreceptor containing charge-generating azo TT pigment

IN Kashizaki, Yoshiro

PA Canon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp. CODEN: JKXXAF

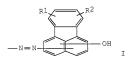
Patent DΨ

LA Japanese

FAN CNT 1

 0111	_	
PA:	PENT	NC

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63282745	A	19881118	JP 1987-116770	198705
				<	15
	JP 2558118	B2	19961127		



The title photoreceptor has on an elec. conductive support a AB photosensitive layer contg. an azo pigment having a structure in which an arom. hydrocarbon ring or an arom. heterocyclic ring is bonded to an org. residue I (R1, R2 = H, alkyl, aralkyl, aryl,

heterocyclyl, NO2, CN, halo, halomethyl, amino; they may form a ring) directly or via a linking group.

IT 119957-74-3 119957-76-5 119957-77-6

119957-78-7 119957-86-7

(electrophotog. charge-generating pigment, for improved sensitivity)

RN 119957-74-3 ZCA

CN

2-Fluoranthenol, 3,3'-[1,4-phenylenebis(2,1-ethenediyl-4,1-phenyleneazo)]bis[8,9-dimethyl- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

RN 119957-76-5 ZCA

CN 2-Fluoranthenol, 3,3'-[1,3,4-oxadiazole-2,5-diylbis(4,1phenyleneazo)]bis- (9CI) (CA INDEX NAME)

RN 119957-77-6 ZCA

CN 2-Fluoranthenol, 3,3'-[1,3,4-thiadiazole-2,5-diylbis(4,1phenyleneazo)]bis[8,9-dimethyl- (9CI) (CA INDEX NAME)

RN 119957-78-7 ZCA

CN 2-Fluoranthenol, 3,3'-[(4-methyl-4H-1,2,4-triazole-3,5-diyl)bis(4,1-phenyleneazo)]bis[8,9-dimethyl- (9CI) (CA INDEX NAME)

PAGE 1-B

RN 119957-86-7 ZCA

CN 2-Fluoranthenol, 3,3',3''-[nitrilotris(4,1-phenyleneazo)]tris[8,9dimethyl- (9CI) (CA INDEX NAME)

_ Me

∽ Me

IT 119957-74-3 119957-76-5 119957-77-6
119957-78-7 119957-86-7
 (electrophotog. charge-generating pigment, for improved sensitivity)